**3GPP TSG-RAN WG3 #127-bis R3-25xxxx**

**Wuhan, China, 7-11 April, 2025**

**Agenda Item: 17.2**

**Source: Huawei (Moderator)**

**Title: Summary of offline discussions: OndemandSSB**

**Document for: Discussion and Approval**

# Introduction

**CB: # ES1\_****OndemandSSB**

* **Check the compromised solution as mentioned above**

(moderator - HW)

# For the Chairman’s Notes

It is proposed to take the following as baseline and to be discussed at the next meeting (no need to capture into the Chairman notes).

**Take the following texts as baseline:**

If the *Cells Allowed to be Deactivated List* IE is contained in the GNB-CU CONFIGURATION UPDATE message, the gNB-DU **may** take it into account to enable the on-demand SSB SCell operation for the indicated cells when they are operating as SCells.

# 3 Discussion on Support on-demand SSB SCell

## 3.1 Background

It was discussed at previous meeting with the follwing notes.

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| **For the allowing On-demand SSB SCell, we discussed the two way-forward as follows:*** **WF1**: No new List from the gNB-CU to the gNB-DU for “allowing OD SSB SCell” is needed, instead we can reuse, if needed, the Rel-18 existing “Cells Allowed to be Deactivated List” (CU to DU). Potential rewording of the procedure may be needed to make the “list” more general.
* **WF2**: It is the gNB-DU to decide how and when to perform “deactivation” or “OD SSB”.

**But the above is not agreed, there are two concerns raised during the discussion:*** One concern is that gNB-DU does not always need the “CU to DU” assistance in order to go to the OD-SSB SCell operation.
* Another concern is how and whether to handle the transition from PCell normal operation to OD-SSB SCell only operation.

**To be continued at the next meeting on the above basis.**  |

In the GNB-CU CONFIGURATION UPDATE message, the **Cells Allowed to be Deactivated List** is included.

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| If the *Cells Allowed to be Deactivated List* IE is contained in the GNB-CU CONFIGURATION UPDATE message, the gNB-DU shall, if supported, consider that it is allowed to deactivate the SSB beams within the indicated cells for network energy saving purpose |

#### 9.2.1.10 GNB-CU CONFIGURATION UPDATE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Cells Allowed to be Deactivated List** |  | *0..1* |  |  | YES | ignore |
| >**Cells Allowed to be Deactivated List Item** |  | *1 .. <maxCellingNBDU>* |  |  | EACH | ignore |
| >>NR CGI | M |  | 9.3.1.12 |  | - |  |

## 3.2 Discussion and conclusion

In order to indicate the allowed cells from the gNB-CU to the gNB-DU for on-demand SSB operation, following options are provided for discussion.

* **Option 1: Reuse the Cells Allowed to be Deactivated List IE, with the updating the procedure texts.**

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| If the *Cells Allowed to be Deactivated List* IE is contained in the GNB-CU CONFIGURATION UPDATE message, the gNB-DU shall, if supported, consider that it is allowed to deactivate the SSB beams within the indicated cells for network energy saving purpose.  |

**Take the following texts as baseline:**

If the *Cells Allowed to be Deactivated List* IE is contained in the GNB-CU CONFIGURATION UPDATE message, the gNB-DU **may** take it into account to enable the on-demand SSB SCell operation for the indicated cells when they are operating as SCells.

* **Option 2: Introduce new indicaor within the Cells Allowed to be Deactivated List**

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|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Cells Allowed to be Deactivated List** |  | *0..1* |  |  | YES | ignore |
| >**Cells Allowed to be Deactivated List Item** |  | *1 .. <maxCellingNBDU>* |  |  | EACH | ignore |
| >>NR CGI | M |  | 9.3.1.12 |  | - |  |
| >>On-demand SSB indication | O |  | ENUMERATED (true, ...) |  | YES | Ignore |

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* **Option 3: Introduce a new cell allowed list, e.g., Cells Allowed to On-demand SSB List in the GNB-CU CONFIGURATION UPDATE message**
* **Option 4: do nothing**

**Proposal: Take option?**

Companies can provide comments in the following table.

|  |  |
| --- | --- |
| Company | Comment |
|  |  |
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# Reference

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| --- | --- | --- |
|  [R3-251751](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251751.zip) | (TP to BLCR for TS 38.473 and TS 38.470) Discussion on on-demand SSB SCell operation (Huawei) | other |
| [R3-252044](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-252044.zip) | On-demand SSB SCell operation (Ericsson) | discussion |
| [R3-251623](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251623.zip) | Aspects of on-demand SSB for NES enhancements (Qualcomm Inc.) | discussion |
| [R3-251642](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251642.zip) | (TP for BLCR to TS 38.423, 38.473) On support of OD-SSB (CATT) | other |
| [R3-251650](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251650.zip) | Open points on OD-SSB. Adaptation of common signals/channels (Nokia) | discussion |
| [R3-251683](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251683.zip) | Support on-demand SSB operation (NEC) | discussion |
| [R3-251723](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251723.zip) | Discussion on on-demand SSB SCell operation in low-carbon green network (Samsung) | discussion |
| [R3-251860](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251860.zip) | (TP to 38.473) On support on-demand SSB SCell operation (China Telecom) | discussion |
| [R3-251892](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251892.zip) | (TP to BL CR for 38.473) Further discussion on on-demand SSB Scell operation (ZTE Corporation) | other |
| [R3-251951](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-251951.zip) | Discussion on On-demand SSB for SCell (Lenovo) | discussion |
| [R3-252041](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-252041.zip) | Discussion on On-Demand SSB SCell Operation (CMCC) | discussion |
| [R3-252117](file:///D%3A%5CMy_work%5CTSGR3-127bis-20250408-Wuhan%5CRAN3-127bis%5CDocs%5CR3-252117.zip) | XnAP Enhancements for UL WUS Configuration in On-Demand SIB1 (Jio Platforms Ltd (JPL)) | discussion |